

REMARKS/ARGUMENTS

Claims 1-20 were pending. Claims 1, 7, 13 and 18 have been amended. No claims have been added or canceled. Hence, claims 1-20 remain pending.

The Office Action of May 8, 2006 rejects claims 1-12 under 35 USC 102(e) as being anticipated by Wang et al. (U.S. Patent No. 6,549,049). Claims 13-20 stand rejected under 35 USC 103(a) as being unpatentable over Chang et al. (U.S. Patent Publication No. 2003/0135836) in view of Wang et al. Applicant respectfully amends in part and traverses in part in addressing the rejections.

As amended, claim 1 provides delay equalizer for balancing clock signals in a clock tree that includes, *inter alia*, a multiplexer operable to receive a select control signal indicating which of a first output clock signal or a second output clock signal to select. The select control signal is programmable on the fly and is constrained to avoid errors in clock distribution. One of many examples of such on the fly programmability is disclosed in Fig. 5 of the specification. None of the cited art discloses, teaches or suggests such on the fly programmability. Hence, Applicant respectfully requests withdrawal of the rejection of claim 1 and allowance thereof for at least this reason. Further, as claims 2-6 properly depend from an allowable base claim, Applicant respectfully requests withdrawal of the outstanding rejection and allowance thereof for at least this reason.

As amended, claim 7 provides a method for balancing clock signals in a node of a clock tree. The method includes, *inter alia*, receiving at a multiplexer a select control signal indicating which of a first output clock signal or a second output clock signal to select. The select control signal is programmable on the fly and is constrained to avoid errors in clock distribution. None of the cited art discloses, teaches or suggests such on the fly programmability. Hence, Applicant respectfully requests withdrawal of the rejection of claim 7 and allowance thereof for at least this reason. Further, as claims 8-12 properly depend from an allowable base claim, Applicant respectfully requests withdrawal of the outstanding rejection and allowance thereof for at least this reason.

As amended, claim 13 provides a method for balancing one or more clock signals in a clock tree having a multi-mode clock distribution. The method includes, *inter alia*,

associating a delay equalizer with each of one or more clock-dividing and selection modules in a clock tree. The delay equalizer is operable to substantially balance the one or more clock signals between two or more functional modes. The method further includes determining one or more clock paths to be balanced, each comprising a multi-mode dependant clock path, wherein the multi-mode dependant clock path includes the two or more functional modes. Contrary to the assertion of the Office Action, “multi-mode” is not the equivalent of “multiple levels”, nor is replacing multi-mode with multiple levels a reasonable reading of the term multi-mode. Rather, multi-mode indicates the inclusion of multiple functional modes such as, for example, functional modes or test modes. Specification at paragraph 48. Chang does not disclose, teach or suggest balancing one or more clock signals between two or more functional modes. Further, there is no disclosure, teaching or suggestion as to how the disclosure of Wang would be combined with Chang to provide the method of claim 13. Said another way, there is no disclosure teaching or suggestion as to how the clock distribution scheme of Chang would be expanded for application to the devices of Wang. Rather, the disclosure of such is provided in Applicant’s specification. Hence, for at least this reason, Applicant respectfully requests withdrawal of the rejection of claim 13 and allowance thereof. Further, as claims 14-17 properly depend from an allowable base claim, Applicant respectfully requests withdrawal of the outstanding rejection and allowance thereof for at least this reason.

As amended, claim 18 provides a system for balancing one or more clock signals in a clock tree having a multi-mode clock distribution. The system includes, *inter alia*, one or more second delay equalizers each associated with each of one or more clock-dividing and selection modules in the clock tree, each second delay equalizer operable to substantially balance the one or more clock signals between two or more functional modes. Again, Chang does not disclose, teach or suggest balancing one or more clock signals between two or more functional modes. Further, there is no disclosure, teaching or suggestion as to how the disclosure of Wang would be combined with Chang to provide the method of claim 18. Hence, for at least this reason, Applicant respectfully requests withdrawal of the rejection of claim 18 and allowance thereof. Further, as claims 19-20 properly depend from an allowable base claim, Applicant respectfully

requests withdrawal of the outstanding rejection and allowance thereof for at least this reason.

Further, claims 16-17 and 19-20 are improperly rejected. In particular, the Office Action points out that “Chang discloses the CTS tool inserting additional buffers” and from this one of ordinary skill in the art would know to place the XNOR gates of the aforementioned claims in the stated configurations. This is not supportable. Said another way, why would one of ordinary skill in the art choose an XNOR gate based on the aforementioned statement from Chang? There is no motivation or suggestion to choose the specific operation of an XNOR gate based on the disclosure of Chang. Hence, for at least this additional reason, Applicant respectfully requests withdrawal of the rejections of claims 16-17 and 19-20 and allowance thereof.

CONCLUSION

In view of the foregoing, Applicant respectfully asserts that all claims now pending in the application are in condition for allowance. Hence, an early allowance of all such claims is earnestly requested.

To the extent necessary, Applicant petitions for an extension of time under 37 CFR 1.136. Please charge any fees in connection with the filing of this paper, including extension of time fees under 37 CFR 1.136, to the deposit account of the assignee, Texas Instruments Incorporated, Account No. 20-0668.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 720-266-4728.

Respectfully submitted,

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